

AD-785 773

TREATMENT OF 'SALMONELLA PARATYPHI A'
OSTEOMYELITIS WITH TRIMETHOPRIMSUL-
PHAMETHOXAZOLE

Z. Farid, et al

Naval Medical Research Unit Number 3

Prepared for:

Abbassia Fever Hospital

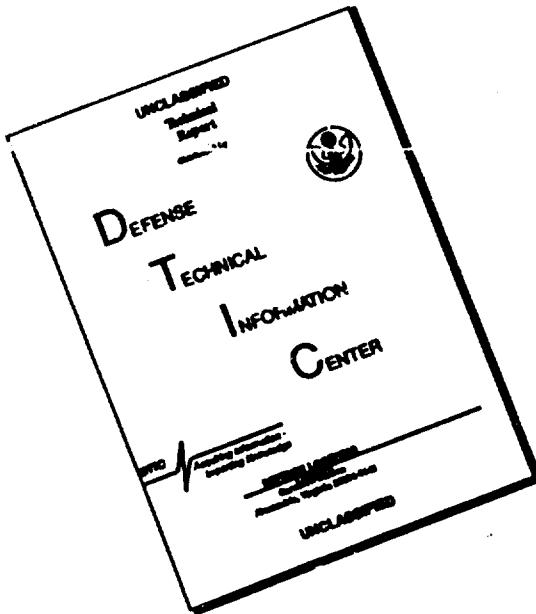
1973

DISTRIBUTED BY:



National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

DISCLAIMER NOTICE



**THIS DOCUMENT IS BEST
QUALITY AVAILABLE. THE COPY
FURNISHED TO DTIC CONTAINED
A SIGNIFICANT NUMBER OF
PAGES WHICH DO NOT
REPRODUCE LEGIBLY.**

UNCLASSIFIED

Security Classification

AD-785773

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annunciation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) U.S. Naval Medical Research Unit No. 3 FPO New York 09527	2a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED
	2b. GROUP

3. REPORT TITLE.

TREATMENT OF Salmonella paratyphi A OSTEOMYELITIS WITH TRIMETHOPRIM-SULPHAMETHOXAZOLE

4. DESCRIPTIVE NOTES (Type of report and inclusive dates) Technical/Scientific report

5. AUTHOR(s) (First name, middle initial, last name)

Z. Farid, H.A. Sparks and A. Hassan

6. REPORT DATE 1972	7a. TOTAL NO. OF PAGES 6	7b. NO. OF PEGS 14
8a. CONTRACT OR GRANT NO.	8a. ORIGINATOR'S REPORT NUMBER (S) NAMRU-3-TR.8-74	
8b. PROJECT NO. c. MR041.20.01-0308	9b. OTHER REPORT NO (S) (Any other numbers that may be assigned this report) Acc.915	

10. DISTRIBUTION STATEMENT

Distribution of this report is unlimited

11. SUPPLEMENTARY NOTES Published in: J. Trop. Med. Hyg. <u>76:</u> 91-93, 1973	12. SPONSORING MILITARY ACTIVITY Bureau of Medicine and Surgery Department of the Navy Washington, D.C. 20392 0372
---	--

13. ABSTRACT

There have been several reports of the use of trimethoprim-sulphamethoxazole in typhoid and paratyphoid A fevers (Akinkugbe et al., 1968; Farid et al., 1970; Kamat, 1970). Its successful use in the treatment of acute staphylococcal osteomyelitis is described by Craven et al. (1970). This paper describes, for the first time, the successful treatment of Salmonella paratyphi A osteomyelitis with this drug

Reproduced by
**NATIONAL TECHNICAL
INFORMATION SERVICE**
 U S Department of Commerce
 Springfield VA 22151

UNCLASSIFIED

Security Classification

14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
<u>Salmonella paratyphi A</u> Osteomyelitis Trimethoprim-Sulphamethoxazole Therapy						

DD FORM 1 NOV 68 1473 (BACK)
(PAGE 2)

UNCLASSIFIED

Security Classification

TREATMENT OF *SALMONELLA PARATYPHI A* OSTEOMYELITIS WITH TRIMETHOPRIM-SULPHAMETHOXAZOLE

Z. FARID, H. A. SPARKS and A. HASSAN

*Tropical Medicine Department, U.S. Naval Medical Research Unit No. 3 and the
Abbassia Fever Hospital, Ministry of Public Health, Cairo, Egypt.*

There have been several reports of the use of trimethoprim-sulphamethoxazole in typhoid and paratyphoid A fevers (Akinkugbe *et al.*, 1968; Farid *et al.*, 1970; Kamat, 1970). Its successful use in the treatment of acute staphylococcal osteomyelitis is described by Craven *et al.* (1970). This paper describes, for the first time, the successful treatment of *Salmonella paratyphi A* osteomyelitis with this drug.

Case Report

A farmer aged 16 years was admitted to hospital complaining of severe pain on movement of the right shoulder joint, fever, weakness and dysuria. He gave a history of having been ill for at least one year with recurrent attacks of fever. These usually lasted one to two weeks. He had noted the shoulder pain and swelling approximately six months after the first febrile attack.

He was pale and febrile (38°C .), and had limitation of motion of the right shoulder. There was a fusiform tender swelling over the upper end of the right humerus. The haemoglobin was 10.5 g./100 ml. , reticulocyte count was less than two per cent, and there was no evidence of haemolysis or sickling. There were live eggs of *Schistosoma haematobium* in the urine and of *Schistosoma mansoni* in the stools. Blood and urine cultures were repeatedly positive for *S. paratyphi A*. Radiography of the right humerus showed an area of bone destruction with new bone formation at the lateral border of the upper extremity, near the shoulder joint (Fig. 1). Material obtained by needle aspiration from the abscess was cultured and yielded *S. paratyphi A*. After one week of trimethoprim-sulphamethoxazole (Bactrim), two tablets twice daily, he became afebrile and blood and urine cultures were reported negative for *S. paratyphi A*. The swelling gradually diminished in size and movement of the shoulder joint became much

easier. By the end of four weeks there was radiographic evidence of bone healing (Fig. 2). Treatment was continued for 10 weeks. Four months after ending therapy there was complete healing of the bone lesion (Fig. 3). Niridazole was later given for treatment of schistosomiasis.

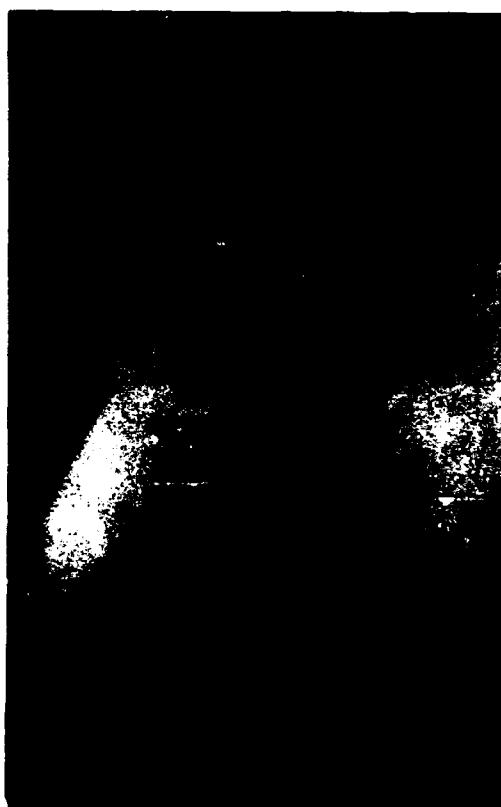


Fig. 1. Osteomyelitis of the upper end of the right humerus. Material aspirated from the abscess grew *S. paratyphi A*. Note periosteal destruction with flaky new bone formation.

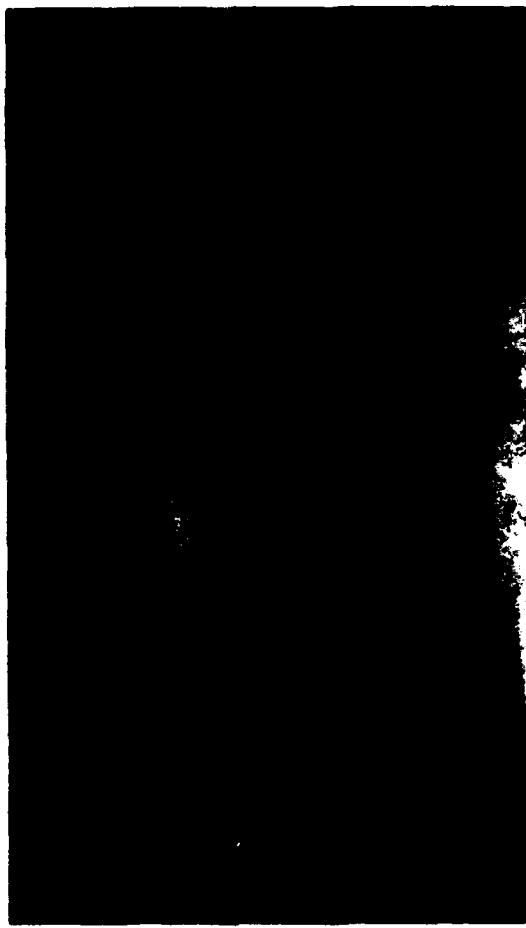


Fig. 2. After four weeks treatment with trimethoprim-sulphamethoxazole.



Fig. 3. Four months after treatment with trimethoprim-sulphamethoxazole showing healed lesion.

Comment

Osteomyelitis is a rare complication of typhoid and paratyphoid A fevers (Aegerter and Kirkpatrick, 1968); none were reported from this hospital during the past 20 years in studies including over 1,000 proven enteric fever patients (El Ramli 1950, 1953; Hathout *et al.*, 1967; Omar and Wahab, 1967; Robertson *et al.*, 1968; Wahab and Robertson, 1969). Others (Terregrosa *et al.*, 1960) reported the occurrence of salmonella osteomyelitis but usually as a complication in patients with sickle-cell disease. There was no evidence of sickle-cell anaemia in our patient. He, however, demonstrated all the classic characteristics of sal-

monella osteomyelitis — prolonged recurrent phases of *S. paratyphi*. A septicaemia with fever and the gradual development of pain and swelling at the upper extremity of the humerus (from which organisms were cultured), and radiographic evidence of bone destruction with periosteal new bone formation (Black *et al.*, 1960).

Farid *et al.* (1970) and Scragg and Rubidge (1971) previously noted the remarkable rapidity with which trimethoprim-sulphamethoxazole alleviates toxicity in patients with typhoid and paratyphoid fevers. Craven *et al.* (1970) also reported prompt response in six patients severely ill with acute staphylococcal

osteomyelitis and treated with trimethoprim-sulphamethoxazole. In the present case, pain and fever rapidly subsided. The swelling gradually disappeared and the bone lesion showed evidence of healing after four weeks of treatment. Healing was complete after four months.

References

- Aegerter, E. and Kirkpatrick, J. A. (1968). Orthopedic Diseases, 3rd edit., London, W. B. Saunders Co., pp. 292.
- Akinlade, O. O., Lewis, E. A., Maestriore, D. and Okubadejo, O. A. (1968). *Br. med. J.*, v3, 721.
- Black, P. H., Kuntz, L. J. and Swartz, M. N. (1960). *New Engl. J. Med.*, v262, 811.
- Craven, J. L., Peggsley, D. J. and Blowers, R. (1970). *Br. med. J.*, v3, 201.
- El Ramli, A. H. (1950). *Lancet*, v1, 618.
- El Ramli, A. H. (1953). *Lancet*, v1, v27.
- Farid, Z., Mannan, A., Wahab, M. F. A. et al. (1970). *Br. med. J.*, v3, 323.
- Mathew, S. E., Ghaffar, Y. A. and Avey, A. Y. (1967). *Am. J. trop. Med. Hyg.*, v16, 462.
- Kammal, S. A. (1970). *Br. med. J.*, v3, 320.
- Omar, M. S. and Wahab, M. F. A. (1967). *J. trop. Med. Hyg.*, v70, 43.
- Robertson, R. P., Wahab, M. F. A. and Ramach, F. O. (1968). *New Engl. J. Med.*, v278, 3.
- Screws, J. N. and Rubidge, C. J. (1971). *Br. med. J.*, v3, 738.
- Terragrossa, M. V. de, Depena, R. B., Hernandez, H. and Ortiz, A. (1960). *J. Am. Med. Ass.*, v174, 359.
- Wahab, M. F. A. and Robertson, R. P. (1969). *Ann. intern. Med.*, v70, 913.